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Subject: IDL and 3D scattered data  
Posted by [T Bowers](#) on Fri, 28 May 1999 07:00:00 GMT  
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Uh oh...

I thought that IDL could help me out with 3D oceanographic data visualization. Turns out it just ain't so. There doesn't seem to be a way to interpolate scattered 3D data in IDL. Anybody know of a routine(s) that'll do what triangulate/trigrd or sph\_scatt will do but in 3 spacial dimensions? BTW, when I say 3D scattered data, I mean \*real\* 3D scattered data. That means 3 independant variables and 1 dependant variable, as in  $x,y,z,f(xyz)$ . E.g., I have data in the form:

Longitude	Latitude	Depth	Temperature
-84.3333	22.6105	0.0	24.2
-84.3333	22.6105	2.7	24.0
-84.3333	22.6105	5.0	23.2
-84.3104	22.6384	0.2	24.2
-84.3104	22.6384	2.2	23.2
-84.3104	22.6384	4.8	23.1
-84.2999	22.6480	0.1	25.1

etc,  
etc.

For some reason alot of scientists and scientific packages refer to 2D plots that are rotated into 3D space as 3D stuff (surface, shade\_surf, and David Fanning's example of using PlotS,.../T3D in his book are good examples. Great book, BTW!). It may be a nit pick, but certainly no one would view a graph of  $f(x)=x$  as a 2 dimensional graph.

Sooo... any thoughts on my rantings? Any pointers to some 3D interpolation stuff?

Thanks,  
Todd

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